REMARKS

The undersigned has been requested to take over prosecution of this application on behalf of the inventor Zorina S. Galis who is the assignee of the rights of the co-inventor J. Carson Meredith. A copy of a power of attorney appointing the undersigned and requesting a change of correspondence address for this application is being filed along with this paper.

An Information Disclosure Statement together with the appropriate fee is also being contemporaneously filed to make of record certain publications that were known to the inventors and were inadvertently not previously filed. These references were called to the attention of the undersigned for the first time this week. The inventors were unaware that copies of these references had not been submitted by previous counsel (not all of which may constitute prior art against these claims), and it is requested that the delay in filing such papers be excused under these circumstances.

The claims have been rewritten so as to more specifically define the invention as a method for identification of substrates which will affect the survival, proliferation or differentiation of stem cells or other undifferentiated cells which includes the steps of culturing such cells upon a defined combinatorial substrate and then appropriately examining the cultured cells, following a period of time of culture, to determine the status of the cells which will be an indication of the effect of the underlying substrate. The product claims have been written so as to recite the combination of the substrate with such different microdomains in combination with a layer of stem cells which have been cultured thereupon and have differentiated to cells of different lineage, allowing analysis of the effect of the underlying surface composition and physical structure.

Support for new claim 14, directed to the method of identifying substrates via the steps of culturing cells upon a combinatorial substrate and then examining the cultured cells, is found throughout the description and particularly in paragraph 10-14 and in Examples 1-3. Support for claim 15 is found in original claim 7. Support for claim 16 is found in original claim 3. Support for claim 17 is found in original claim 1 and paragraph 15. Support for claims 18 and 19 is found in original claims 4 and 5. Support for claim 20 is found in paragraph 17 and paragraph

55. Support for claim 21 is found in paragraph 77. Support for claims 22-24 is found in Example 3. Support for claim 25 is found in the penultimate sentence of paragraph 42 and in paragraph 67. Support for claims 26-28 is found in original claims 4 and 5 and in paragraphs 35 and 65. Support for claim 29 is the same as that for claim 14, plus the recitation of the preferred cells set forth in paragraph 53. Support for claim 30 is found in Example 3. Support for claim 31 is the same as for claims 23 and 26. Support for claim 32 is found in original claim 11. Support for claim 33 is the same as for claim 20.

The original claims were rejected as anticipated by or obvious over the disclosure of U.S. Patent No. 5,776,747 to Schinstine et al (hereinafter Schinstine et al). Schinstine et al is not concerned with the analysis of the effect that a plurality of different underlying surface compositions will have on the growth of particular cells, but is instead concerned with the creation of a bioartificial organ by growing cells upon an appropriate scaffold. More specifically, Schinstine et al does not utilize substrates having multiple microdomains which are characterized by differing surface compositions and/or differing physical properties for the purpose of simultaneously culturing cells upon such different microdomains and then analyzing the effect which these different particular microdomains have upon the cells that were cultured thereupon. In other words, Schinstine et al are not concerned with investigation and analysis but are instead concerned with providing a surface that is most conducive to the growth of a particular cell line so as to afford its use as part of a bioartificial organ. Schinstine et al do not employ a substrate having multiple microdomains in the form of distinct pattern of discrete regions that vary in surface composition and/or physical properties and using that substrate for investigation of the effect of these different microdomain regions on stem cells or undifferentiated cells which have been cultured thereupon following a period of time in culture.

It is submitted that new claims 14-33 define a method of analysis of the effect of such a pattern of different microdomains on a single substrate have upon stem cells or other undifferentiated cells, and a product that is a result thereof, which would not be anticipated by or obvious from the disclosure of Schinstine et al. It is accordingly requested that the rejection on this basis be reconsidered in light of the amended claims and withdrawn, and that claims 14-33 be allowed.

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Respectfully submitted,

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